

## **Transformation of Risk Management in Specialised Financial Institution of Pakistan dealing in Agricultural Finance**

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### **Abstract:**

*The rationale of this study investigated the risk management practices (RMP) of agricultural banking. Therefore evidences reserved from the Zarai Taraqati Bank Limited of Pakistan (ZTBL). For precision two fold techniques for gathering of data used; from formal questionnaires and individual interviews using judgmental sampling. Various econometric and statistical tools applied to test hypotheses. Findings reveal the regressive approach of the management and staff towards Risk Management. So comprehensive policy is required to reframe it including training of overall staff about Basel Accord and risk-averse mechanism. ZTBL has a big network of 32 Zones, but the study comprised of small sample from three Zones. Agricultural Credit has a vital role in agro-based economy of Pakistan. So the remodeling of RM in ZTBL is duly favorable for regulators, academicians, management and the farmers' communities. It is deemed as an important study to empirically explore the RM in Agricultural Credit of Pakistan.*

**Keywords-** *Non-Performing Loans; delinquency ratio of Bank; Basel regulations; Operational-Liquidity and Credit risk modeling; Pakistan*

### **1. Introduction**

In the developing country like Pakistan the Agricultural Sector is the major contributor to the GDP of economy. According to Bureau of Statistics Government of Pakistan ([www.pbs.gov.pk](http://www.pbs.gov.pk)), it provides 25.3 percent of GDP as 68 percent of the population belong to rural sector, which produce 45.1 percent of labour force. Food sector is the sole contribution of export earnings to the tune of 17.5 percent of GDP. Similarly 60 percent of raw-material received for agro-based industry like textile, sugar and tanneries from this sector. Financing is one of the important components for the progress and development of any sector. So to flourish the financial needs of agricultural sector the different banks of Pakistan have granted loans (Burki, 2007). The statistics showed 598.3 billion rupees disbursed in agricultural credit during FY-2016, which is almost 100 percent of the annual target of 600 billion rupees assigned by the State Bank of Pakistan. Pakistan

is an agro-based economy so for the reason Zarai Taraqiati Bank Limited -(ZTBL) played a vital role as a specialized financial institution in banking industry of Pakistan, which contributes to the development of agriculture through disbursement of credit in different schemes under long, medium and short term needs of the farmers. It disbursed 90.97 billion rupees covering 89.2 percent of annual target of 102 billion of rupees assigned by the government of Pakistan (SBP, 2016). Risk is the biggest factor involved in any type of financing especially in agricultural sector due to various tangible and intangible reasons. Therefore the Tanninen(2013) states the Credit risk as Default risk means the occurrence of loss due to the inability of borrowers to pay back. The Business Dictionary.Com estimates that the probability of threat may be avoided through preemptive. In the words of (Burt, 2001) the Risk is the chance than an occasion may be taken placed. Burki (2007) states that the risk is the possibility of definite loss of earning or equity. Drollette(2009) describes that the risk can be termed as a possibility of harmony of inauspicious outcomes due to tentative and imperfect knowledge in making judgment. As defined by Hardaker(2004), Bukenya&Chembezi (2006) and Nair (2009) the agricultural risk can be of two types as Localized Risk, which influence the life of farmer or the lender in case of either death or illness of a person. The second type of risk is called “Highly Correlated Risk”, which carries the risks that affect whole the society.

According to Ngathou(2006) the Risk is an innate component of trade and societal life. The exposure of risk can be minimized in financial institutions by implementing well organized risk management practices (RMPs). The Banks and Monetary Institutions are deemed to be the backbone industries of any nation. Therefore this study is actually dealing with Banks role in the theoretical lens of Rational Banking Practices. Therefore in the words of Carey(2001) the management of risk in Monetary Organization is desperately needed than any other sector of economy. The major duty and responsibility of financial institution is to maximize its profit. The Risk can be bifurcated into two types’ vis-à-vis Systematic risk related to whole economy or overall market as well as unsystematic risk in banking industry. The Risk Mitigation and Transmission techniques can be adopted to minimize the systematic risk. Santomero and Oldfield (1997) stated some essential risk-mitigation strategies: 1. A simple trading activities may be applied to minimize the risks. 2. Risk may be transferred to other participants; and 3. Active management of risk at banks level is called a Risk Acceptance approach. Hakim (2005) pointed out after implementation of effective risk management tools the performance as well as the returns of any organization can be increased. So for this reason risk management practices are dire in need for the healthy life of financial institutions (Carey, 2001). The Neaime (2005) defines that the financial institutions of Pakistan adopt Ratio of Capital Adequacy as per the prevailing standards of Basel II.

The Basel II is used by way of a technique in lending decision and makes the spirit crystal clear to administer the risk in an efficient manner (Rob and Calem, 1999). Shafiq and Nasr (2010) pointed out that the Pakistan Banking has faced different types of risk regarding risk of market, foreign exchange, liquidity and credit respectively due to the economic volatility of the nation. The financial institutions are well experienced in the exposure of credit risk with various tools & techniques as trade financing, forex, financial future, swaps, bonds, equities, options, extension of pledges, transactions settlements and guarantees respectively. After close comparison of Islamic as well as Conventional Banking there are many areas of Risks, which need further investigated likewise the institutions dealing in Agricultural Credits. On the basis of said discussion the ongoing research addresses the purposes as under: 1. for dealing numerous

risks the Pakistani banks used to adopt different Risk Management Practices and Techniques. 2. To examine the practices in risk management with reference to agricultural credit. 3. To improve the weaker area of risk management practices on the basis of these studies, findings, suggestions and recommendations respectively. The key motive of this study is to determine the strategies to reframe Operational, Credit and Liquidity Risk Modeling and risk-averse mechanism in the line with Basel-Standards for ZTBL during the vision 2008-2018 pertained to Democratic Government. Appended below are the research questions based on the purposes mentioned above regarding transformation of RM model:

RQ1. What are the exploratory presumptions for the practices pertained to risk management an evidence from ZTBL?

RQ2. What are the derivations covering risk factors and whether the ZTBL has remodeled its risk management philosophy to control its ongoing financial catastrophes?

RQ3. What importance needs to be drawn on the framework of Basel-III after infertility of the previous accords to safeguard the financial disasters?

Following objectives are established to elaborate the above research questions:

- (1) To appraise and identify the philosophy of risk management in ZTBL;
- (2) To appraise and reframe of risk modeling using personal interviews of ZTBL officials;
- (3) To explore the risk-averse mechanism in ZTBL;
- (4) To observe the response of High-ups under the guidance of Basel Accord regarding RM framework in lieu of Basel-III standards;

## **2. Literature Review**

MeorAyub (2006) states that the Risk Management is a way forward practice engaged in decision making on regular and timely basis. The Financial Risk Management is a four processes series as per Banking Supervision Committee of Basel Accord (BCBS, 2001) that is identification of events in broader classes of Operational, Credit, Liquidity, Market and other risks. It may be further sub-divided as the risk model for the valuation of data, timely reporting and supervising of risk assessments, the senior management to control these risks. It can be observed from the definition that the basic risk management structure comprised of four important pillars of Risk Management. And these include risk identification, risk measurement, risk mitigation and risk monitoring and reporting respectively. On the whole there are three major kinds of banking risks like hazard or pure risk, financial and non-financial risk respectively. The financial risk is further segregated into the following types of risks pertained to market, credit, liquidity, interest rate, foreign exchange, solvency and capital adequacy respectively. The non-financial risk is deemed as operational risk. According to Rosman (2009) the research structure is a Risk Management Practices and the classification of Risk Management Processes. The structure defines the relationship of four features of risk management process and risk management practices as: 1. Understanding Risk and Risk Management (URM). 2. Risk Identification (RI). 3.

Risk analysis and assessment (RAA) 4. Risk Monitoring (RM). Zarai Taraqiati Bank Limited (ZTBL) former Agricultural Development Bank of Pakistan (ADBP) (<http://www.ztbl.com.pk/AboutUs.aspx>) is the leading financial organization dealing in the development of agriculture through loaning facilities based on modern technology. The reformation of the then ADBP is being taken placed with the aim to up lift the rural as well as agriculture sector by maximizing yield of the farm, restructuring the organizational credit and increasing revenue generation tendency of community pertained to farmers. After revocation of ADBP Ordinance 1961 the establishment of ZTBL had been taken placed on 14<sup>th</sup> of December,

2002 as a Public Limited Company. In this manner it's the revolution of ZTBL as a corporate body to hand around as Rural Financial Institutions (RFI). So the status of the bank has altogether changed as Public Limited Entity after adopting Joint Stock Companies Ordinance 1984 with separate Board of Directors aiming for the declaration of good governance, sovereignty and delivery of high quality services. ZTBL is the only RFI, which is playing a pivotal role in provision of all types of financial and non-monetary or financial services to the Rural Class of Pakistan to the extent of 68 percent of total population. ZTBL has a large network of branches throughout the country and serving millions of clients. The factual position as on 31.12.2011 shows that the bank's total assets comprised of Rs. 123 billion, Rs. 25 billion as authorized capital along with country-wide human strength of 5789 employees. ZTBL secures 40 percent share in Total Agricultural Credit of Pakistan as on 31.12.2013.

Angelopoulos and Mourdoukoutas (2001) state that if we keenly observe the behavior and features of the wide spread banking structure, we may observe that the risk management is a sense towards risk and results related to it. According to Niinima Ki (2004) the level of competition on bank risk taking has been observed through the framework and the size of market wherein the competition is taking place. Wetmore (2004) investigated that there is a strong correlation of advances to the primary deposit ratio of enormous scale financial organizations and the liquidity risk and described that the regular advance to basic deposit ratio. Bagdi and Khambata (2003) explored an eminent tool in shape of Off-Balance-Sheet (OBS) based on financial derivatives to cater Credit Risk duly prevailed all over 20 large Banks of Japan. Al-Tamimi (2002) emphasized that the UAE based Monetary Institutions used to apply Risk Management Techniques relating to different types of risks. The research study defined that the major problem of the commercial banks of UAE was the risk related to credit. The research interprets that the main technique in investigating risk identification is the critical analysis of financial statements by the managers. The techniques adopted in risk management as per this research were formulating principles, credit scoring, analysis of credit worthiness, security, indemnity and risk rating the research study further determined the keenness of the Monetary Organization of United Arab Emirate to practice latest and suffice tools of risk management and extracted the acceptance of traditional credit policy.

It is further investigated by Saurina and Salas (2002), which applied the group data to compute the problematic factors pertained to loans of Commercial as well as Saving Banks of Spain as they have defined the credit risk in banking sector of Spain during the period 1985 to 1997 after studying both macro and microeconomic level variables of the bank. According to Santomero and Oldfield (1997) the management of risk in banks and monetary organizations is based on four steps of integrated risk management techniques: 1. The Reports & Standards to be established, 2. the obligation of situation, restrictions and policies (that is existing exposure, limits of the credit and arrangement application), 3. The composition of self-dealing policies and related strategies, 4. The establishment of incentive policies as well as Compensation plans on the basis of performance respectively. The impending study conducted by Nasr and Shafiq (2010) for determination of customary risk management practices those may be equally considered and implemented in the banks of Pakistan. The data for this study has been gathered from both the sources that are primary as well as secondary respectively. And the conclusion was the momentous difference between government as well as private sectors financial institutions. Furtherance to that the financial soundness indicator varies from bank to bank. So far as the implication of risk management is concerned it has been observed that the level of understanding

of each individual employee is different about risk management practices. And this gap can be overcome by the introduction of on the job trainings of the staff within an organization for examining the details how universal monetary organizations intensified their Risk Management abilities to cope with the universal monetary crises. The Economist Intelligence Unit (2010) held extensive survey of 346 global level high-ups in finance. Outcomes depicted that just to the account of 40 percent of the contenders (realizing the significance of risk management) had efficiently adapted Risk Management Skills in their monetary organizations; wherein the plenty of correspondents were at the initial. Signifying authoritarian effects of Basel-III risk management structure, Fitch's attempts [ . . . ] (Financial Times, 2012) pointed out the compliance of Basel- III requirements, the assets base of 29 largest global monetary organizations for amounting to 47 trillion US\$ (as a district) required to maintain a capital of 566 billion US\$. After the vacuity of Basel-I and Basel-II autocratic frameworks to overstep from the latest monetary crisis.

Atkinson, Wignall and Bundell (2010) examined valuable performance of Basel-III capital proposal to find out the basic authoritarian issues of the financial institutions. According to Jessop & Harms (2012) the index insurance is considered as a new innovation in agriculture banking. In this technique the disbursement to the peasant is interconnected with the doorstep facility. So when the index passes that doorstep disbursement to the grower is taken placed without having any additional amount of expenditure or loss as the case may be. Fissha (2009) stated that the government can establish special contingences reserves for disaster relief management regarding compensation of small farmers at the time of catastrophe. Jessop & Harms (2012) state that the there are various methods to manage the Policy Risk. The security as a collateral used in agricultural credit is the agricultural land and the financing may be increased with the establishment of more compact policies and procedures. The institutional reforms are a burning issue, which can be resolved through proper planning and legislation by the government. It has been concluded from the review of above literature that every organisation is required to adopt the risk management practices around the globe. Agricultural Credit has a vital role in Agro-based economy of Pakistan. So being a monopolist in Agricultural Credit the ZTBL has been selected to extend research in examining and exploring the Risk Management culture of this institution on the basis of different variables derived from previous studies to find out the impact of the implementation of following figurative aspects that is understanding management, risk identification, assessment of risk and analysis, monitoring of risk, Operational risk analysis, Liquidity risk analysis, Market risk, risk governance, and credit risk analysis on risk management practices (Sania et al 2012; Bilal et al 2013; Asma 2016). Referring the findings of obtainable fiction, this study is deployed to determine the avant-garde variations to the vision 2008-2018 of government towards restructuring of ZTBL. Referring to gratify the objectives of study, the appended below hypotheses were established to discover the evidences of reframing of risk management:

Ho1. URM, ARA, RI, LRA, ORA, RMR have optimistic relationships with RM practices in ZTBL.

Ho2. There are no evidential deviations in ZTBL to take causal computations on pivotal banking risks derived from the previous studies.

Ho3. The reframing of risk management practice and it has a consequential influence on potential RM policies in ZTBL.

Ho4. Adoption of Basel-III standards may have evidential impact on reframing of risk management in ZTBL.

### **3. Introduction to Study Population**

The ZTBL is a specialized Rural Financial Institution of Pakistan exploring reasonable rural and agriculture monetary and non-monetary services to the rural Pakistan to the tune of 68 percent of total population. The Bank comprised of the wider network of 440 branches and serving more than half a million clients annually along with one million aggregated depositors as well as borrowers to the tune of around Rs. 162331 serving percentage 68, 29 and 3 of small, medium and large growers respectively. The staff strength of ZTBL is 5699 along with 3698 under its subsidiary company as Kissan Support Service (Pvt.) Limited. Similarly the ZTBL has attained the license from State Bank of Pakistan for opening of 21 (13 conventional and 8 commercial) branches in the coming months to start commercial as well as Islamic banking respectively (ZTBL, 2015).

### **4. Sampling, collection of data, assessment and analysis**

The sample of the study has based upon the staff of ZTBL. To certify a profound thoughtfulness in this study, bi-dimensional technique for the collection of data adopted through closed ended questions by distributing formal questionnaires to the field staff pertained to branches as well as Zonal Office, Lahore, Sheikhpura and Okara respectively. Secondly through open ended questions during personal interviews from the experienced employees. Respondents have been selected on the basis of their relevant experiences in branch banking operations, credits and administration respectively. Judgmental sampling technique has been used on convenience basis in this research related pilot study. The questionnaire developed with due modification on the basis of scale items of study conducted by (Bilal *et al.* 2013 and Asma 2016). All the questions are measured on seven point likert-scale ranging from strongly disagree, disagree, disagree somewhat, undecided, agree somewhat, agree and strongly agree respectively. Questionnaire was pre-tested on the basis of standardized reliability and validity, which had later been reformed according to the response key post employees. A small sample size based on 155 respondents from different branches nominated for credit appraisal leading to Operational as well as Liquidity Risks respectively. To certify the uniformity of the research study personal interviews gathered with the interval of two months after getting the empirical results through SPSS to test significance level on the basis of two different techniques. Multiple-imputation technique for getting regression, correlation and other statistical outcomes has been adopted in SPSS for replacement and imputation of missing values at 7% of data for homogenous population.

The values derived from descriptive statistics regarding mean of means as well as the mean of standard deviation that the high mean value of CRA-5.41 with SD-1.24; ORA-5.20 with SD-1.19; and LRA-5.05 with SD-1.26 reveal that the model is good fit for high lighting the three main risks of ZTBL. Liquidity Risk Analysis is required to be measured through Liquidity Stress Testing & Scenario Analysis. Similarly the implications of risk-averse mechanism and Basel-III regulations need to be implemented through Risk filtration system (RFS).

**Table (i)-Descriptive Statistics**

Sr. No.	Variables	Mean of Means	Mean of S.D.
01	Understanding Risk Management (URM)	4.74	1.69
02	Assessment of Risk and Analysis (ARA)	4.67	1.37
03	Risk Identification (RI)	4.49	1.56
04	Risk Monitoring and Reporting (RMR)	4.84	1.34
05	Credit Risk Analysis (CRA)	5.41	1.24
06	Operational Risk Analysis (ORA)	5.20	1.19
07	Liquidity Risk Analysis (LRA)	5.05	1.26
08	Risk Management Practices (RMP)	4.65	1.55

Source: Derived from the personal survey based on previous studies (Al-Tamini, 2007; Al-Mazrooei, 2007; Hassan, 2009 and Bilal et al. 2013)

### 5- Regression & Correlation Analysis

The regression results illustrated the value of Durbin-Watson (D-W) showed the assessment as 2.036; tolerance was not lower than 0.221 and variance information factor (VIF) was not higher than 4.75 except in RAA, which exist non-existence of the autocorrelation and multicollinearity issue in record except in one of the constructs as (RAA) with minor difference from the prescribed criteria Hence the reliability showed relatively satisfactory having Cronbach alpha full-fills the condition of ( $0.699 \leq 0.70$ ) to interpret the findings. The results showed that all the predictors' variables as Risk Identification (RI), Risk Monitoring and Reporting (RMR), Credit Risk Analysis (CRA), Operational Risk Analysis (ORA), Liquidity Risk Analysis (LRA) were satisfactorily significant with ( $p \leq 0.01$ ), which testify the grander prominence of these Risk Practices in ZTBL. However the Understanding Risk Management (URM) as well as Assessment of Risk & Analysis (ARA) were optimistic having positive values, but insignificant in this research study model. Regression outcomes, LRA defined as most dominant variables with Beta-value ( $\beta$ ) as 0.337 that was the highest amongst all other variables in this research study followed by RMR, RI, ORA, RAA, URM and CRA respectively. The value of Coefficient of determination  $R^2$  has been rationalized by Adj.  $R^2$  to avoid an over-optimistic observation of model fit. In the Regression model the value of adj.  $R^2$  determined 86.0%, which further testified that how strongly multiple-exogenous variables have an impact on Risk Management Practices in ZTBL. The interpretation of this study has been derived from Bilal et al (2013) with some needful contradiction with reference to insignificance of (URM) & (RAA) as predictors respectively, which is due to mediocre Sample size of this research study.

**Table (ii)-Defining Reliability Analysis of the Exogenous and Endogenous Variables**

Sr. No.	Risk Measurement Variables	Cronbach's $\alpha$
1.	Understanding Risk Management (URM)	0.742
2.	Risk Assessment and Analysis (RAA)	0.902
3.	Risk Identification (RI)	0.699
4.	Risk Monitoring and Reporting (RMR)	0.866
5.	Credit Risk Analysis (CRA)	0.888
6.	Operational Risk Analysis (ORA)	0.779
7.	Liquidity Risk Analysis (LRA)	0.873
8.	Risk Management Practices (RMP)	0.886

Source: Derived from Bilal et al (2013) and Asma (2016)

The regression results found out the concurrent influence of Risk Management Practices Agricultural Credit evidenced from Zarai Taraqati Bank Limited of Pakistan. The findings determined that all the defined exogenous variables have optimistic positive association with conventional significance level. The LRA with highest value of ( $\beta = 0.337$ ,  $p = 0.000$ ), followed by other predictors as RMR ( $\beta = 0.329$ ,  $p = 0.000$ ), RI as ( $\beta = 0.314$ ,  $p = 0.000$ ), ORA as ( $\beta = 0.127$ ,  $p = 0.008$ ), RAA as ( $\beta = 0.048$ ,  $p = 0.499$ ), URM as ( $\beta = 0.015$ ,  $p = 0.769$ ) and CRA as ( $\beta = 0.093$ ,  $p = 0.076$ ) respectively; hence H1 is validated. The Regression model  $R^2$  having value 0.867 depicting that expounded variation of 86.7 percent with adjusted  $R^2$  expanded value of 86.0 percent is due to influence of exogenous variables on endogenous variable. The research study outcomes discovered that all selected exogenous variables have significant involvement on risk management process in ZTBL. Furtherance to which all constructs have duly effective and far-reaching impact on eventual Risk Management Policies. Therefore H2 and H3 are fully supportive. The table showed the F-value of 136.484 with significant level of 0.000, which is larger enough to highlight that concurrent influence of exogenous variables was significantly noticeable to the variance of efficient risk management process.

**Table (iii)-Regression Analysis**

Variables	Un-stand. $\beta$	SE	Stand. $\beta$	COLLINEARITY STATISTICS		ANOVA STATISTICS		
				Tolerance	VIF	t	Sig. level	
(Constant)	0.562	0.211				2.669	0.008	
URM	0.015	0.051	0.015	0.337	2.966	0.294	0.769	**
RI	0.360	0.052	0.314	0.433	2.311	6.861	0.000	**
RAA	0.043	0.063	0.048	0.177	5.634	0.677	0.499	
LRA	0.369	0.067	0.337	0.239	4.179	5.466	0.000	**
ORA	0.167	0.062	0.127	0.408	2.451	2.691	0.008*	**
RMR	0.339	0.066	0.329	0.221	4.526	5.141	0.000	**
CRA	0.101	0.057	0.093	0.335	2.985	1.785	0.076	*
$R^2$	0.867							
Adj. $R^2$	0.860							
F.Stat	136.484	@Sig. F-Change	0.000					
Durbin-Watson	2.036							

Note: Significant at: \*  $\leq 5$  and \*\*  $\leq 1$  percent levels

**Table (vi)-Correlations**

	1	2	3	4	5	6	7	8
Understanding Risk Management	1							
Risk Identification	.632**	1						
Risk Assessment and Analysis	.780**	.740**	1					
Risk Management Practices	.710**	.737**	.831**	1				
Liquidity Risk Analysis	.725**	.579**	.781**	.849**	1			
Operational Risk Analysis	.433**	.383**	.608**	.667**	.641**	1		
Risk Monitoring and Reporting	.609**	.511**	.740**	.822**	.797**	.700**	1	
Credit Risk Analysis	.443**	.368**	.492**	.614**	.667**	.678**	.759**	1

\*\* . Correlation is significant at the 0.01 level (2-tailed).

\*\* . Convergent Validity

The matrix of correlation is basically a table showing the correlation coefficients between different sets of variables. Wherein each variable shows its relationship with other variable. The one on diagonal of the table means the correlation between a variable and itself is always and equal to one. In other words the correlation matrix is called symmetric matrix. In this research model the values comprised of Pearson’s Correlations Coefficient showing positive significant correlation between all the exogenous variables in order to test Convergent Validity.

**6. Findings based on empirical analysis of theoretical framework**

Results of the regression along with personal survey through interviews with Operations and Credit Officers of the Zarai Bank were in the line with hypotheses of research and verified that:

H1. The judgements retrieved from statistical analysis determined that URM, RAA, RI, ORA, CRA, LRA and RMR have optimisticrelationships with Risk Management Practices in ZTBL, hence Ho1 is accepted; wherein personal survey through face to face as well as telephonic interviews envisaged that ZTBL has alsodedicated on some auxiliary risks pertained to ongoing challenges likewise Technology risk, reputational risk and settlement risks respectivelyBilal et al. (2013).

H2. The ZTBL is a specialized financial institution dealing in agricultural credit in contrast to other conventional and Islamic banks based on the previous studies Sania and Shehla, (2012). So no significant difference found as the results of the study conducted at 5 percent level of significance. Therefore Ho2 is accepted.

H3. The establishment of separate Risk Management Department during the ear of democratic government (2008-2018) for implementation & adoption of Basel-II regulations seems that bank has a vision and mission to remodel its risk management nomenclature to cope with financial risk.So H3 is accepted.

H4. The findings based on personal interviews as well as from the demographic statistics through frequencies analysis envisaged that the branch banking operations and credit staff desire to have formal training sessions about Risk Management and Basel Accord Therefore H4 substantiated.

The Econometric Model of this study has been derived from the literature based on the previous studies conducted by the researchers with slight moderation in inducted exogenous variables for the only endogenous variable the RMP (Blundell et al 2010; Al-Tamimi et al. 2007;Shehla et al. 2012;Bilal et al. 2013 and Asma 2016) respectively.

(\*)  $RMP = f(UMR, RI, RAA, RMR, ORA, LRA, CRA) \dots \dots \dots$  (Econometric Model)

Finding based on personal interviews and survey of bank’s profiles; it has been observed that the risk management is undoubtedly adopted and implemented, but due to lack of proper coordination and timely follow-up between Human Resources Department, Training Management Department, Risk Management Department and trickle down to branch operations and credit department respectively the risk management has been taken for granted. So 92.8 percent respondents believe in “One-size-fit-for-all” strategy for improvement in prevailing set up. Similarly comprehensive training plan is required regarding training on operational risk mitigation as Anti-Money Laundering (AML), Terrorists Financing (TF), Know your Customer (KYC), Customer Due Diligence (CDD), Market Cheques (MCs), Non-blood references, External Risk Rating (ExRR), Internal Risk Rating (InRR), Risk Modeling (RMod), Management Information System checks (MIS), Payment System Risk (PSR), Security and system access (SSA) monitoring of transactions. As far as Credit Risk Monitoring is concerned the trainings need for relationship name clearance (RNG), Analysis of Cash Flow (AOCF), Ratio Analysis like EPS, Leverage, Liquidity, Acid-Test, Basic Fact Sheet (BFS), Credit risk ratings (CRR), Electronic Credit Information Bureau (eCIB) reporting from State Bank of Pakistan, Collateral clearance analysis (CCA). Besides in house training sessions at Staff College of ZTBL the bank needs to hire the services of eminent institutions likewise Institute of Risk Management (IRM), Pakistan Institute of Management (PIMS), Institute of Bankers Pakistan (IBP), National Institute of Banking & Finance (NIBAF), ISO 31000, Omega Risk Management (ORM-LLC), Asia Risk Management Institute (ARiMI), Institute of Islamic Banking (IISB).

Respondents of ZTBL unanimously agreed on the appended below survey based on ten key risks selected on observational basis and derived the theme from previous study for significant screening of risk.

**Table (v)-Significant Review regarding Important Risks derived from Survey**

Sr. no.	Risks	Degree of Acceptance
1	Operational Risk	0.75
2	Liquidity Risk	0.71
3	Credit Risk	0.79
4	Compliance & Regulatory Risk	0.72
5	Reputational Risk	0.60
6	Interest Rate Risk	0.66
7	Repayment Risk	0.62
8	Settlement Risk	0.59
9	Legal Risk	0.71
10	Technology Risk	0.91

Source: Findings of Personal Interviews technique (degree of significant acceptability: 0-1) derived from Bilal et al. (2014)

Keeping in view the financial crunch of first decade of the ongoing century giving ultimatum to reframe banks' financial risk modeling with special reference to Operational, Credit and Liquidity risks to strengthen the affairs of bank (Al-Tamimi (2007 and Bilal et al. 2013). During personal interviews from the Bank Officials along with critical examination of statistical findings, it has been concluded that the ZTBL is facing operational as well as technology risks following therein the credit and liquidity risks; so the very many focus needs to be granted to remodel the risk strategy on the convention of "one-size-fit-all" to strengthen risk management of the bank. ZTBL is facing the liquidity distress, which can be minimized by injecting of adequate equity through share float and snatching of huge amount of deposits.

### **7. Conclusions and Limitations**

The conclusion of this study discovers the vision 2008-2018 of Democratic Government for Agricultural Credit through ZTBL resides the restructuring, technological advancement, deposit mobilization, establishment of Islamic window and floating of shares in capital market. But the partial fulfillment of this plan is due to regressive approach of management towards modern market trends, inefficiencies of employees union and unnecessary political influence. This study is confined to the judgements of financial risk modeling evidence from Zarai Taraqiati Bank Limited of Pakistan with a prevailing and forthcoming financial and monetary challenges for agricultural credit sector. Pragmatic exploration is conducted in ZTBL that is a specialized financial institution having monopolistic role in the economy of Pakistan regarding growth and development of agricultural credit.

### **8 Recommendations**

Consequent upon the vision 2008-2018 the bank has successfully established its Risk Management Department along with procedural manuals during 2012 after adoption of Basel-II regulations. But the results of this study concluded that the ZTBL is facing three major risks based on empirical findings as well as personal survey regarding LRA, ORA and TRA respectively. So proceeding the recommendations of (Wignall et al 2010 and Bilal et al 2013), survey respondents were strongly recommended to renovate prevailing regulatory framework by switching over to Basel-III guidelines to cope with all the gaps in standing financial system of the bank, improve the training sessions of the operational and credit related staff regarding understanding of risk management, improve the assessment of risk and analysis system to imply efficient techniques to certify regulatory acquiescence to avoid probable monetary crises. A prudent approach based on general perception derived to adopt the Cost Minimization Strategy that leads to the maximization of bank's profitability, minimization of risks of default and delinquency ratio (non-performing loans to the assets). For the better implementation of Risk Management the systems of internal and external monitoring through auditors and inspection teams need to be improved.

### **9 Future Research**

Consequent upon this study model, forthcoming research can be conducted, enlarged and extended to the sample size covering total population of ZTBL from other Zones or may have a comparative study between public sector and private sector banks dealing in agricultural credit and micro financing for better understanding of risk management strategies for minimizing risks related to banking default for establishing institutional framework of Pakistani Bank pertained to Agricultural Credit in a profound and strengthen manner.

**References**

- Al-Tamimi, H. (2002). Risk management practices: an empirical analysis of the UAE commercialbanks. *Finance India*, 16(3), 1045-57.
- ANDREI IU. BEJAN, Andrei IU. Bejan, Largest Eigenvalues and sample covariance matrices. Tracy-Widom and Painleve II: Computational Aspects and realization in S-Plus with applications.
- Angelopoulos, P., & Mourdoukoutas, P. (2001). *Banking Risk Management in a Globalizing Economy*. Quorum Books, Westport, CT.
- Asma, A. R. (2016). *A Comparative Study of Risk Management Practices between Islamic and Conventional Banks in Pakistan (ETHOS)*, Cardiff Metropolitan University, London, UK.
- Bilal, A.R., Noraini, Bt A.T., & Mohd Noor Azli, A.K. (2013). Remodeling of risk Management in banking: evidence from the sub-continent and gulf. *The Journal of Risk Finance*, 14(5), 468-489.
- Blundell-Wignall, A. & Atkinson, P. (2010). Thinking beyond Basel III: necessary Solutions for capital and liquidity. *OECD Journal Financial Market Trends*, 2010,1-20.
- Burt, B., A. (2001). Definitions of risk. *Journal of dental education*, 65(10), 1007-1008.
- Burki, S. (2007). *Risk Management In Agricultural Finance (Research Report)*.
- Calem, P., & Rob, R. (1999). The impact of capital-based regulation on bank risk-taking. *Journal of Financial Intermediation*, 8(4), 317-352.
- Carey, A. (2001). Effective risk management in financial institutions: the Turnbull approach. *Balance Sheet*, 9(3), 24-27.
- Drollette, S. A. (2009). *Managing Financial Risk in Agriculture*, (March).
- Economist Intelligence Unit (2010), *After the Storm: A New Era for Risk Management In Financial Services*, EIU, available at: [www.sas.com/resources/whitepaper/wp\\_9196.pdf](http://www.sas.com/resources/whitepaper/wp_9196.pdf)
- Fauziah, H., Tafri, R., Rahman, A., & Normah, O. (2011). Empirical evidence on the risk Management tools practiced in Islamic and conventional banks. *Qualitative Research in Financial Markets*, 3(2), 86 – 104.
- Financial Times (2012). Fitch attempts to tally the cost of Basel III. *Financial Times*, available at: <http://ftalphaville.ft.com/blog/2012/05/17/1003371/fitch-attempts-totally-the-cost-ofbasel-iii/> (accessed May 25, 2012).
- Fissha, J. A. a. A. (2009). *Managing risk in financing agriculture*. Paper presented at the *Managing Risk In Financing Agriculture*, Johannesburg, South Africa.
- Hakim, S., & Neaime, S. (2005). Profitability and Risk Management in Banking: A Comparative Analysis of Egypt and Lebanon. *Money and Finance in the Middle East: Missed Opportunities or Future Prospects*, 6, 117-131.
- Hardaker, J. B. (Ed.). (2004). *Coping with risk in agriculture*. Cabi.
- Hussein, A., Hassan, Al-Tamimi., Faris, M., Al-Mazrooei. (2007). Banks' risk management: a comparison study of UAE national and foreign banks. *The Journal of Risk Finance*, 8(4), 394 -409.
- Hussein, A., Hassan, Al-Tamimi. (2008). Implementing Basel II: an investigation of the UAE banks' Basel II preparations. *Journal of Financial Regulation and Compliance*, 16(2), 173 – 187.
- [http://www.sussex.ac.uk/its/pdfs/SPSS\\_Missing\\_Values\\_22.pdf](http://www.sussex.ac.uk/its/pdfs/SPSS_Missing_Values_22.pdf)
- Jessop, R., & Harms, J. (2012). *Creating Access to Agricultural Finance* Creating

- Access to Agricultural Finance, *International Journal of African and Asian Studies- An Open Access International Journal*, 5 2014.
- Khambata, D., & Bagdi, R.R. (2003). Off-balance-sheet credit risk of the top 20 Japanese banks. *Journal of International Banking Regulation*, 5(1), 57-71.
- Meor, Ayub. (2006). Risk management in the banking environment: a rating agency perspective. Paper presented at the Seminar on Risk Management in Islamic Financial Services, Marriot Hotel, K. Lumpur, April 25-26.
- Nair, A. (2009). *Financing Agriculture: Risks and Risk Management Strategies*, Johannesburg, South Africa.
- Naveed, A., & Kashif, Ur., R. (2013). Risk Management Practices and attitude of Pakistan Islamic Banking System employees. *African Journal of Business Management*.
- Nazir, S. M., & Daniel, A. (2012). Risk Management Practices: A Comparison of Conventional and Islamic Banks in Pakistan. *American Journal of Scientific Research*.
- Ngathou, I. N., Bukenya, J. O., & Chembezi, D. M. (2006). Managing agricultural risk: examining information sources preferred by limited resource farmers. *Journal of extension*, 44(6).
- Niinimäki, J., & JEcon. (2004). The Effects of Competition on Banks' Risk Taking. *Journal of Economics* March 2004, 81(3), 199-222.
- Oldfield, G.S., & Santomero, A.M. (1997). Risk management in financial institutions. *Sloan Management Review*, 39(1), 33-46.
- Oldfield, G. S., & Santomero, A. M. (1997). The place of risk management in financial Institutions. Center for Financial Institutions Working Papers.
- Paul, E., & Marius, H. (2011). PRACTICES AND ISSUES IN OPERATIONAL RISK MODELING UNDER BASEL II. *Lithuanian Mathematical Journal*, 51(2), 180–193  
<http://www.statisticshowto.com/kaiser-meyer-olkin/>
- Rosman, R. (2009). Risk management practices and risk management processes of Islamic banks: a proposed framework. *International Review of Business Research Papers*, 5(1), 242-54.
- Salas, V., & Saurina, J. (2002). Credit risk in two institutional regimes: Spanish commercial and savings banks. *The Journal of Financial Services Research*, 22(3), 203-16.
- Sania, K., & Shehla, A. (2012). Risk management practices in Islamic banks of Pakistan. *The Journal of Risk Finance*, 13(2), 148 – 159.
- SBP (2012), State Bank of Pakistan, available at: [www.sbp.org.pk](http://www.sbp.org.pk).
- Shafiq, A., & Nasr, M. (2010). Risk Management Practices Followed by the Commercial Banks in Pakistan. *International Review of Business Research Papers*, 6(2), 308-325.
- Tahir, H., & Madiha, L. (2014). Credit Risk Management Practices Used by Banks in Agricultural Finance: A Case Study of Pakistan. *International Journal of African and Asian Studies*.
- Tanninen, M. (2013). Determinants of credit risk in secured loans—Evidence from the autoloan industry.
- Wetmore, J.L. (2004). Panel data, liquidity risk, and increasing loans-to-deposits ratio of large commercial bank holding companies. *American Business Review*, 22(2), 99-107.
- ZTBL (2015)**, Zarai Taraqiati Bank Limited, available at: [www.ztbl.com.pk](http://www.ztbl.com.pk)

## APPENDICES

### RESEARCH QUESTIONNAIRE ON TRANSFORMATION OF RISK MANAGEMENT IN SPECIALISED FINANCIAL INSTITUTION OF PAKISTAN DEALING IN AGRICULTURAL FINANCE-EVIDENCE FROM ZARAI TARAQIATI BANK LIMITED OF PAKISTAN.

#### **Respected Sir/Madam/Respondent,**

Kindly accept my gratitude in advance for taking your precious time to answer this questionnaire. It will hardly take **20-25 minutes** only. The undersigned is a PhD research scholar/student at The Superior Group of Colleges (Univ.), Lahore. This research is being conducted for my PhD thesis. Please read through following details especially the last page to continue the survey.

#### **-- Purpose of the Research:**

The implementation of Risk Management Practices under Basel-(III) Accord is a need of the day to cope with risk measures in the banking industry especially at ZTBL, which is a specialized financial institution in Agricultural Credit. The purpose of this research study is to investigate whether Risk Management Practices are properly implemented and adapted by ZTBL in all its Operational as well as Financing affairs in true letter & spirit. The research will also help the individuals to learn about different terminologies, functions and role of risk management practices at institutional level for further review of policies, if there need any improvement regarding operational or credit affairs of the ZTBL about Banking Practices.

#### **-The Questionnaire consists of following sections:**

- Section A- Company's Profiles
- Section B- Respondent's Profiles
- Section C- Understanding Risk Management
- Section D- Risk Identification
- Section E- Risk Assessment and Analysis
- Section F- Risk Management Practices
- Section G- Managing Market Risk
- Section H- Managing Liquidity Risk
- Section I- Managing Operational Risk
- Section J- Risk Monitoring and Reporting
- Section K- Credit Risk Analysis
- Section L- Risk Governance
- Section M- Risk Measurement and Mitigation Tools

#### **-- Privacy and Confidentiality:**

It is brought into your kind notice that the identity of yours may be kept anonymous and the data will also be preserved confidential and treated with care and respect.

**Section A: Company's Profiles**

- 1- Ownership: Public  Private
- 2- Type of bank: Islamic Bank  Conventional Bank  Specialized Institution
- 3- Which of the following risk identification methods are used by your bank (please choose the suitable option)
  - a. Inspection by the bank Staff
  - b. Audit and Physical Inspection
  - c. Financial Statement Analysis
  - d. Risk Survey
  - e. Process Analysis
  - f. SWOT Analysis
  - g. Benchmarking
  - h. Inspection by Shari'ah Board Members (for Islamic Products only)
  - i. Internal Communication
  - j. Stress Testing
  - k. Others (if any)
- 4- The main risk faced by your bank are (please tick the most appropriate option):
  - a. Credit Risk
  - b. Operational Risk
  - c. Liquidity Risk
  - d. Foreign Exchange Risk
  - e. Interest Rate Risk (for non-Islamic Products only)
  - f. Rate of Return Risk (for Islamic Products only)
  - g. Market Risk
  - h. Strategic Risk
  - i. Solvency Risk
  - j. Regulatory Risk
  - k. Leverage Risk
  - l. Reputation Risk
  - m. Shariah Risk (for Islamic Products only)
  - n. Equity Risk
  - o. Hedging Risk
  - p. Transparency Risk
  - q. Technology Risk
  - r. Others (if any)

**Section B: Respondent's Profiles**

S. No	1	2	3	4	5	6	7	8	9	10	11	12	13	14
01	Ranks	Driver	S.Guard	N.Qasid	Assistant /Sr. Assistant	OG-III	OG-II	OG-I	AVP	VP	SVP	EVP	SEVP	President
02	Functional Designation	Divisional Head	Zonal Chief	ZM (Admin.)	ZM (Oprs.)	ZM (Cr.)	Br. Manager	Operation	OICA-Incharge	MCO	Compliance Officer	Recovery Officer	Junior Manager	Teller/Cashier Other specify
03	Experience with in ZTBL	0-3	3-6	6-9	9-12	12-15	15-18	18-21	21-24	24-27	27-30	30-33	33-36	36-39

04	Experience outside ZTBL (Service at any other Bank)	0-3	3-6	6-9	9-12	12-15	15-18	18-21	21-24	24-27	27-30	30-33	33-36	36-39
05	Academic Qualification	0yrs	5yrs	8yrs	10yrs	12yrs	14yrs	16yrs	18yrs/M. Phil	20yrs/PhD	22yrs/Post Doc	Others if any	-	-
06	Professional Qualification	M.COM	MBA	MA (Eco.)	MCS	DAIBP	JAIBP	AIBP	ACMA	ACCA	ACA	Others if any	Engineer	Doctor
07	Age Group	20-25	25-30	30-35	35-40	40-45	45-50	50-55	55-60	-	-	-	-	-
08	Knowledge about Risk Mgt. (Basel Accord)	No	Some how	Yes	-	-	-	-	-	-	-	-	-	-
09	Any Training attended on Risk Mgt. (Basel Accord)	No	Yes	-	-	-	-	-	-	-	-	-	-	-
10	Desire to get training on Risk Mgt. (Basel Accord)	No	Yes	-	-	-	-	-	-	-	-	-	-	-
11	Gender	Male	Female	-	-	-	-	-	-	-	-	-	-	-

12	Region	Capital (Islamabad)	Punjab (Urban)	Punjab (Rural)	Sindh (Urban)	Sindh (Rural)	KPK (Urban)	KPK	Balochistan	Balochistan (Rural)	Gilgit-Balistan	Gilgit-Balistan	-	-
13-(A)	Zone	Karachi-1	Haydera bad-2	Mirpur Khas-3	Sukkur-4	Larkana-5	Shaheed R. Abad-6	Multan-	D.G.Kh an-8	Sahiwal-9	Lahore-10	Gujranw ala-11	Bahawal-12	Faisalab ad-13
13-(B)	Zone	Sargodha-14	Islamabad-15	Vehari-16	Muzaffar garh-17	Rahimyar Khan-18	Peshawar-19	D.I.	Abotabad-21	Mangora-22	Turbat-23	Quetta-24	D.M. -25	Muzaffar abad (AK)-26
13-(C)	Zone	Gilgat-Balistan-27	Bahawaln agar-28	Jhang-29	Okara-30	Sialkot-31	Sheikhpur-32	-	-	-	-	-	-	-

**Section C: Understanding Risk Management (URM)**

**Question 1-9 relate to understanding risk management with regards to the risk management practices in ZTBL. Please indicate the extent of your agreement with each statement by encircling/ticking the appropriate number based on the following scale.**

Strongly Disagree	Disagree	Disagree Somewhat	Undecided	Agree Somewhat	Agree	Strongly Agree					
1	2	3	4	5	6	7					
1	Risk Management is commonly understood throughout the ZTBL.				1	2	3	4	5	6	7
2	Responsibility of Risk Management is understood and openly set out across the ZTBL.				1	2	3	4	5	6	7
3	The Policy of Risk Management is communicated down the organizational hierarchy and equally understood by the concerned stake holders likewise risk taker, risk reviewers etc.				1	2	3	4	5	6	7
4	Accountability process of risk management is visibly set out and understood across ZTBL.				1	2	3	4	5	6	7
5	Success and performance of the ZTBL is based on Risk Management.				1	2	3	4	5	6	7
6	It is vital to apply most sophisticated techniques in risk management.				1	2	3	4	5	6	7
7	The prime air of ZTBL is to extend the applications of modern risk management techniques.				1	2	3	4	5	6	7
8	It is substantial for ZTBL to accentuate on constant appraisal and assessment of the techniques castoff in risk management.				1	2	3	4	5	6	7
9	Applications of risk management techniques condense costs or anticipated losses.				1	2	3	4	5	6	7

**Section D: Risk Identification (RI)**

**Question 1-6 relate to risk identification system adopted in ZTBL. Please indicate the extent of your agreement with each statement by encircling/ticking the appropriate number based on the following scale.**

Strongly Disagree	Disagree	Disagree Somewhat	Undecided	Agree Somewhat	Agree	Strongly Agree					
1	2	3	4	5	6	7					
1	ZTBL takeout a broad and efficient identification of its risk concerning to each of its statedgoals and ideas.				1	2	3	4	5	6	7
2	Risk documentation is anunremittingprocedure in ZTBL at transactional and portfolio stages.				1	2	3	4	5	6	7
3	The ZTBL finds it hard to recognize, and rank its core risk.				1	2	3	4	5	6	7
4	Variations in risk are predictable and recognized with the ZTBL’s instructions and duties.				1	2	3	4	5	6	7
5	ZTBL is cognizant of the strengths and weaknesses of the risk management structures of the other banks.				1	2	3	4	5	6	7
6	ZTBL has established and functionaltechniques for the organizeddetection of investment opportunities.				1	2	3	4	5	6	7

**Section E: Risk Assessment and Analysis (RAA)**

**Question 1-7 relate to risk assessment and analysis adopted in ZTBL. Please indicate the extent of your agreement with each statement by encircling/ticking the appropriate number based on the following scale.**

Strongly Disagree	Disagree	Disagree Somewhat	Undecided	Agree Somewhat	Agree	Strongly Agree					
1	2	3	4	5	6	7					
1	ZTBL evaluates the probability of risk manifestation.				1	2	3	4	5	6	7
2	ZTBL measures risks by expending qualitative investigation method (e.g. high, moderate and low)				1	2	3	4	5	6	7
3	ZTBL considers risk by exhausting quantitative exploration method.				1	2	3	4	5	6	7
4	ZTBL evaluates and appraises the prospects that it has to attain objectives.				1	2	3	4	5	6	7
5	ZTBL’s reaction to exploring risk embraces a valuation of the costs and benefits of each pertinent risk.				1	2	3	4	5	6	7
6	ZTBL’s retort to analyzing risk containslisting of risk and choosing those that need an application of dynamic management.				1	2	3	4	5	6	7
7	ZTBL’s response to considering risk comprisesordering risk managements where there are meansrestraints on risk treatment execution.				1	2	3	4	5	6	7

**Section F: Risk Management Practices (RMP)**

**Question 1-15 relate to risk management practices in ZTBL. Please indicate the extent of your agreement with each statement by encircling/ticking the appropriate number based on the following scale.**

Strongly Disagree	Disagree	Disagree Somewhat	Undecided	Agree Somewhat	Agree	Strongly Agree
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Disagree		Somewhat			Somewhat			Agree			Strongly Agree					
1		2		3		4		5		6		7				
1	Risk administration policy of the ZTBL noticeably defined the roles and duties of various representatives of the bank.									1	2	3	4	5	6	7
2	One of the leading objects of ZTBL is an active risk organization.									1	2	3	4	5	6	7
3	ZTBL is highly effective in uninterrupted evaluation/ response on risk management strategies and enactment.									1	2	3	4	5	6	7
4	Executive management of ZTBL recurrently reviews the bank's performance in managing its business risk.									1	2	3	4	5	6	7
5	ZTBL's risk management processes and progressions are acknowledged and provide direction to staff about managing risks.									1	2	3	4	5	6	7
6	ZTBL's policy boosts training programs in the risk management and ethical areas.									1	2	3	4	5	6	7
7	ZTBL emphasizes the employment of highly qualified people with understanding of risk management.									1	2	3	4	5	6	7
8	Risk management program is interconnected from top to down level in ZTBL.									1	2	3	4	5	6	7
9	ZTBL has an inclusive risk management procedure (including Board and Senior Management) oversight to detect measure, evaluate, monitor, report and control all material risks on timely basis.									1	2	3	4	5	6	7
10	ZTBL discovers it risky enough to invest funds in one specific sector of the economy.									1	2	3	4	5	6	7
11	Risk management strategy of ZTBL is elastic enough to deal promptly and tolerably with all risks.									1	2	3	4	5	6	7
12	Solicitation of Basel II and Basel III Accord will expand the efficiency and Risk Management Practices in the ZTBL in general and predominantly in your bank.									1	2	3	4	5	6	7
13	ZTBL is successfully instigating the Basel Committee and Central Bank guidelines/principles in regard to risk management.									1	2	3	4	5	6	7
14	ZTBL assesses the competence of their capital and liquidity in relation to their risk outlines, market and macro-economic environments.									1	2	3	4	5	6	7
15	I ruminates the level of Risk management Practices of ZTBL to be exceptional.									1	2	3	4	5	6	7

**Section G: Managing Market Risk (MMR)**

**Question 1-5 relate to the Market Risk adopted in ZTBL. Please indicate the extent of your agreement with each statement by encircling/ticking the appropriate number based on the following scale.**

Strongly Disagree	Disagree	Disagree Somewhat	Undecided	Agree Somewhat	Agree	Strongly Agree										
1	2	3	4	5	6	7										
1	The Market Risk Tactic set by the Board of Directors are commendably transmuted and linked with in ZTBL in the shape of Guidelines and Processes by the Top Management.									1	2	3	4	5	6	7

2	The ZTBL has an active Risk Management structure (setup, method and programs in place for managing market risk)	1	2	3	4	5	6	7
3	The ZTBL’s inclusive market risk disclosure is upheld at cautious levels and reliable with the obtainable capital.	1	2	3	4	5	6	7
4	The ZTBL assumes numerous risk measurement methods to internment market risk in various business activities.	1	2	3	4	5	6	7
5	The bank frequentlyformulatessporadic report of market risk.	1	2	3	4	5	6	7

**Section H: Liquidity Risk Analysis (LRA)**

**Question 1-11 relate to Liquidity Risk Analysis in ZTBL. Please indicate the extent of your agreement with each statement by encircling/ticking the appropriate number based on the following scale.**

**Part-(I)**

Strongly Disagree	Disagree	Disagree Somewhat	Undecided	Agree Somewhat	Agree	Strongly Agree					
1	2	3	4	5	6	7					
1	Liquidity is a key factor of the reliability of banking sector.				1	2	3	4	5	6	7
2	The “Management Board” describes liquidity risk tactic, and in specific bank’s forbearance for liquidity risk based on commendation made by Treasury and Risk Committee.				1	2	3	4	5	6	7
3	Management of ZTBL stretches due contemplation to external and internal featurepretense liquidity risk while framing the liquidity policy.				1	2	3	4	5	6	7
4	ZTBL’s policy states general liquidity approach (short and long term)				1	2	3	4	5	6	7
5	Policy is flexible enough to deal with the unusual liquidity pressures.				1	2	3	4	5	6	7
6	Board of Directors and Senior Management review liquidity policy regularly in your bank.				1	2	3	4	5	6	7
7	Asset Liability AdministrationCommissionencompasses of senior management from each key area of operations in ZTBL.				1	2	3	4	5	6	7
8	Asset Liability AdministrationCommission is liable for revising and acclaiming liquidity risk policies in ZTBL.				1	2	3	4	5	6	7
9	ZTBL has identified the means and methods to encounter its funding needs.				1	2	3	4	5	6	7
10	Stress Testing and Scenario Analysis shows a dominant role in liquidity risk management structure of ZTBL.				1	2	3	4	5	6	7
11	ZTBL applied Stress Test relied upon Value at Risk (VaR) technique as market risk management tool.				1	2	3	4	5	6	7

**Part-(II)**

Which instrument please indicates the ZTBL uses to manage Liquidity (Most appropriate only).

1	Cash Reserve Ratio	
2	Discount Window Operations	
3	Open Market Operations	
4	Liquidity Ratio	
5	Others (if any)	

**Section I: Operational Risk Analysis (ORA)**

Question 1-5 relate to Operational Risk Analysis in ZTBL. Please indicate the extent of your agreement with each statement by encircling/ticking the appropriate number based on the following scale.

Strongly Disagree	Disagree	Disagree Somewhat	Undecided	Agree Somewhat	Agree	Strongly Agree					
1	2	3	4	5	6	7					
1	There is an appropriate set of instructions and procedures for treatment of operational risk available in ZTBL.				1	2	3	4	5	6	7
2	Board and executive management of the bank identifies, comprehends and has demarcated all categories of operational risk related to their institution.				1	2	3	4	5	6	7
3	Senior management of the ZTBL transmutes the tactical route given by the board through operational risk management policy.				1	2	3	4	5	6	7
4	The ZTBL has exigency and business stability plans to safeguard its capability to function as going concern and reduce losses in the event of Spartan business distraction.				1	2	3	4	5	6	7
5	The ZTBL often formulates sporadic report of operational risk.				1	2	3	4	5	6	7

**Section J: Risk Monitoring and Reporting (RMR)**

Question 1-9 relate to risk monitoring and reporting in ZTBL. Please indicate the extent of your agreement with each statement by encircling/ticking the appropriate number based on the following scale.

Strongly Disagree	Disagree	Disagree Somewhat	Undecided	Agree Somewhat	Agree	Strongly Agree					
1	2	3	4	5	6	7					
1	Observing the efficacy of risk management is a vital part of tedious management reporting in ZTBL.				1	2	3	4	5	6	7
2	Level of control by the ZTBL is suitable for the risk that it faces.				1	2	3	4	5	6	7
3	Reporting and communication procedures within ZTBL sustain the active management of risks.				1	2	3	4	5	6	7
4	The ZTBL's reaction to risk embraces an assessment of the efficacy of the prevailing controls and risk management responses.				1	2	3	4	5	6	7
5	The ZTBL's reaction to risk comprises action plans in executing verdicts about identified risk.				1	2	3	4	5	6	7
6	Management of ZTBL monitors employment of risk management policy and make necessary modifications.				1	2	3	4	5	6	7
7	Management of ZTBL frequently monitors the efficacy of risk management system.				1	2	3	4	5	6	7
8	The organizational arrangement of ZTBL reinforces observing and control over risks being taken.				1	2	3	4	5	6	7
9	Chief Risk Officer/Risk Administration function is accountable for risk monitoring within your bank.				1	2	3	4	5	6	7

**Section K: Credit Risk Analysis (CRA)**

**Question 1-10 relate to Credit Risk Analysis in ZTBL. Please indicate the extent of your agreement with each statement by encircling/ticking the appropriate number based on the following scale.**

<b>Strongly Disagree</b>	<b>Disagree</b>	<b>Disagree Somewhat</b>	<b>Undecided</b>	<b>Agree Somewhat</b>	<b>Agree</b>	<b>Strongly Agree</b>					
<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>	<b>6</b>	<b>7</b>					
<b>1</b>	ZTBL commences a credit worthiness analysis before granting loans.				<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>	<b>6</b>	<b>7</b>
<b>2</b>	Before granting loans ZTBL assume a specific analysis including the client’s characters, capacity, collateral, capital and conditions.				<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>	<b>6</b>	<b>7</b>
<b>3</b>	Borrowers are categorized according to a risk factor (risk rating) in ZTBL.				<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>	<b>6</b>	<b>7</b>
<b>4</b>	Credit Policy proportionate with the overall risk management policy.				<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>	<b>6</b>	<b>7</b>
<b>5</b>	ZTBL acquires information about the borrowers from credit information bureau.				<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>	<b>6</b>	<b>7</b>
<b>6</b>	Administration of ZTBL has set out credit limits for various client segments, economic sectors, geographical locations etc. to avoid attentiveness of credit.				<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>	<b>6</b>	<b>7</b>
<b>7</b>	Credit risk is monitored on regularly basis and reported to senior management.				<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>	<b>6</b>	<b>7</b>
<b>8</b>	ZTBL has credit risk administration commission to oversee credit risk management function.				<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>	<b>6</b>	<b>7</b>
<b>9</b>	Credit administration confirms proper approval, extensiveness of documents, receipts of collateral and endorsement of exclusions before credit disbursement.				<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>	<b>6</b>	<b>7</b>
<b>10</b>	Board periodically reviews the credit risk strategy and credit policy.				<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>	<b>6</b>	<b>7</b>

**Section L: Risk Governance (RG)**

**Part-(I)**

**1- Does the board of directors of your bank involved in risk management process?**

Yes		No	
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**2- Please indicate your bank’s managerial and/or board committees that regularly deal with risk management issues. (please tick only appropriate option)**

a.	Risk Management Committee	
b.	Audit Committee	
c.	Executive Committee	
d.	Asset and Liability Management Committee	
e.	Other (please specify)	

**3- The implementation of regulation for risk management in your bank is based on: (please tick as appropriate)**

a.	Basel-(II)	
b.	Basel-(III)	
c.	Islamic Financial Service (IFSB)	
d.	Accounting & Auditing of Islamic Finance (AAOIF)	
e.	Other (please specify)	

**Part-(II)**

**Question 1-18 relate to Risk Governance in ZTBL. Please indicate the extent of your agreement with each statement by encircling/ticking the appropriate number based on the following scale.**

Strongly Disagree	Disagree	Disagree Somewhat	Undecided	Agree Somewhat	Agree	Strongly Agree					
1	2	3	4	5	6	7					
1	ZTBL’s Board of Directors commends and supervises risk appetite structure; strategies and methods to implement risk management framework in the bank.				1	2	3	4	5	6	7
2	ZTBL’s Board of Directors has appropriate skills linked to financial industry and risk management as well as time obligation with the bank.				1	2	3	4	5	6	7
3	Board of Director expresses and defines the command and duties of board-level committees (Risk Committee, Audit Committee) dealing with Risk Governance.				1	2	3	4	5	6	7
4	Risk Management Committee offersadequateplans and approaches for risk management.				1	2	3	4	5	6	7
5	Risk Management Committee members of ZTBL are autonomous and eligible.				1	2	3	4	5	6	7
6	Risk Committee reviews and endorses risk tactic to Board of Directors and administersexecution of risk management structure.				1	2	3	4	5	6	7
7	CEO progresses and applaud overall business tactic, risk approach, risk appetite statement and risk tolerance.				1	2	3	4	5	6	7
8	Chief Risk Officer progresses, monitor and reports on risk metrics to reveal Risk appetite statement to risk Committee.				1	2	3	4	5	6	7
9	Chief Risk Officer supervises risk administration function at ZTBL.				1	2	3	4	5	6	7
10	Internal auditors confirm that risk administrationprocedures are in compliance with the ZTBL’s policies.				1	2	3	4	5	6	7
11	Internal auditors estimate the efficacy and proficiency of risk administrationprocedures.				1	2	3	4	5	6	7
12	Internal auditors are sovereign and directly liable to the Board of Directors.				1	2	3	4	5	6	7
13	The role of central bank is active in administering the risk administrationprocedure at ZTBL.				1	2	3	4	5	6	7
14	ZTBL’s Board and Senior Administrationappraisal internal audit reports, prudential reports, and external professionals report as a part of Risk Governance structure.				1	2	3	4	5	6	7
15	ZTBL’s reward policies and practices are consistent with banks’ corporate culture, long-term objectives and strategy and control environment.				1	2	3	4	5	6	7

16	ZTBL avoids reward policies that generate incentives for excessive risk taking.	1	2	3	4	5	6	7
17	ZTBL is administered in a translucent manner.	1	2	3	4	5	6	7
18	ZTBL disclosure embraces the information of Financial and operating results	1	2	3	4	5	6	7
19	ZTBL disclosure contains the information of the Remuneration of Board and Senior Administration	1	2	3	4	5	6	7

**In your view, Comprehensive approach to managing risks consists of:**

A	Identifying exposures and quantify risk.	
B	Developing exposure forecasts beyond what is usually available from traditional accounting information.	
C	Developing a risk management Policy.	
D	Developing a risk management strategy and trading controls.	
F	All of above.	

**Section M: Risk Measurement and Mitigation Tools**

**1- Please indicate and rank (as 1,2,3.....) in order of importance the method(s) used by ZTBL to identify risks:**

Sr. No.	Method	Rank
A	Audit of Physical Inspection	
B	Inspection by the Bank Risk Manager	
C	Inspection by outside expert	
D	Risk Survey	
E	Benchmarking	
F	SWOT Analysis	
G	Process Analysis	
H	Financial Statement Analysis	
I	Scenario Analysis	
J	Internal Communication with Employees	
K	Other: (please specify)	

**2- To manage risk we undertake the following practices (please indicate and rank (as 1,2,3.....) in order of importance):**

Sr. No.	Practices	Rank
A	Mitigate Risks.	
B	Eliminate Risks.	
C	Avoid Risks.	
D	Transfer Risks.	
E	Actively Manage Risks.	
F	Accept Risks as it is	

**3- Please indicate and rank (as 1,2,3.....) in order of importance the risks, which are facing by ZTBL:**

Sr. No.	Risks	Rank
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A	Liquidity Risk	
B	Foreign Exchange Risk	
C	Credit Risk	
D	Operational Risk	
E	Legal Risk	
F	Solvency Risk	
G	Counterparty Risk	
H	Interest Rate Risk	
I	Price Risk	
J	Reputation Risk	
K	Strategic Risk	
L	Other: (please specify)	

**4- Please indicate and rank ( as 1,2,3.....) in order of importance the method(s) used in risk management at ZTBL:**

Sr. No.	Methods	Rank
A	Value at Risk (VaR)	
B	Statistical Methods in Risk Measurement	
C	Duration (Average of life) Analysis	
D	Comprehensive Risk Management	
E	Establishing Standards (e.g. credit limits)	
F	Periodical Reports	
G	Assets diversification	
H	Derivatives (i.e. forwards, futures, options and swaps)	
I	Gap Analysis	
J	Hedging	
K	Collateral	
L	Credit worthiness Analysis	
M	Instructions	
N	Pricing of Loan	
O	Other (please specify)	

**5- Please indicate and rank (as 1,2,3.....) in order of importance the method(s) used in credit risk management at ZTBL:**

Sr. No.	Methods	Rank
A	Bankruptcy Modeling	
B	Behaviour Scoring	
C	Credit Score	
D	Good/Bad Analysis	
E	Line Increase/Decrease Matrices	
F	Portfolio Stratification	
G	Risk Rating	
H	Roll Rates (A method to measure expected delinquency)	
I	Sensitivity Analysis (Stress Testing)	
J	Vintage Analysis (only delinquency) and arrears are analyzed from a	

	given pool of loans	
K	Others (please specify)	

===== END OF SURVEY QUESTIONS =====

**References**

(*) Mustika, G., 2004. <i>Optimal Bank Regulation and Risk Management for Indonesia</i> . PhD. Loughborough University, United Kingdom.
(**) The Hussein A. Hassan Al-Tamimi Faris Mohammed Al-Mazrooei, (2007), "Banks' risk management: a comparison study of UAE national and foreign banks", <i>The Journal of Risk Finance</i> , Vol. 8 Iss 4 pp. 394 - 409
(***) Ismal. R., 2010. <i>The Management of Liquidity Risk in Islamic Banks: The case of Indonesia</i> . PhD. Durham University, United Kingdom.
(****) Questionnaire adapted by Sania Khalid Shehla Amjad, (2012), "Risk management practices in Islamic banks of Pakistan", <i>The Journal of Risk Finance</i> , Vol. 13 Iss 2 pp. 148 – 159
(*****) Mian Sajid Nazir & Adeel Daniel (2012), "Risk Management Practices: A Comparison of Conventional and Islamic Banks in Pakistan", <i>American Journal of Scientific Research</i>
(*****) Ahmad Raza Bilal, & Noraini Bt. (2013), "Remodeling of risk management in banking: evidence from the sub-continent and gulf", <i>The Journal of Risk Finance</i> · November 2013
(*****) Ishtiaq, M., 2015. <i>Risk Management in Banks: Determination of Practices and Relationship with Performance</i> . PhD. University of Bedfordshire, United Kingdom.
(*****) Asma, A. Rehman., 2016. <i>A Comparative Study of Risk Management Practices between Islamic and Conventional Banks in Pakistan</i> . PhD. Cardiff Metropolitan University, United Kingdom.